

CORRUGATED METAL PIPELINE

Design Survey

The following information shall be obtained and recorded in notes:

- a. Profile along centerline of conveyance.
- b. Cross-sections at critical locations.
- c. Detailed topography at structure locations.
- d. Pertinent water surface elevations.
- e. Critical elevation of area to be served.
- f. Soils investigations (classification and corrosion potential if required). (Soils can be shown on soils map.)

Design Data

The following shall be considered minimum in the design of all underground irrigation water conveyance systems. The information shall be recorded in the design notes. Appropriate data shall be transferred to the construction drawings.

- a. Capacity requirements based on needs.
- b. Hydraulic design including appurtenances.
- c. Structural design.
- d. Pipeline design (consideration of internal pressure and external loading where applicable).
- e. Quantity computations.

Drawings and Specifications

The construction drawings shall include but will not be limited to the following:

- a. Over all plan view of conveyance and area to be served.
- b. Location map. (May be combined with a.)
- c. Plan and profile showing design grade.
- d. Structural plans and sections views as required.
- e. Location and size of appurtenances.
- f. Conveyance diameter and class or rating.
- g. Details of installation requirements.
- h. Table of quantities.

Practice specifications along with applicable "Items of Work and Construction Details" shall be provided for each item or phase of construction as needed, to clarify the work.

Layout Survey Notes

The following information shall be recorded in the field notes:

- a. Centerline alignment stakes with offset grade stakes.
- b. Appurtenance locations.
- c. Structure layout, alignment and reference stakes.

Compliance Checks

The complexity of the conveyance will dictate the need for compliance checks during construction. All compliance checks shall be recorded in the field notes. Narratives of construction checks shall be recorded in the job diary or on a sheet in the field notes. Compliance checks shall include but will not be limited to the following.

- a. Profile and cross-section of trench at critical locations.
- b. Adequacy of bedding and backfill.
- c. Pipe diameters and class or rating.
- d. Size and location of appurtenances.
- e. Dimension and elevation of structures.
- f. Results of pressure test if required.
- g. Statement of compliance.

As-Built Plans

As-Built plans shall be prepared for all underground irrigation water conveyance systems. These drawings shall reflect all significant changes in linear measurements, quantities, alignment, pipe classification or design changes. If there were no significant changes, the original drawings shall be marked "As-Built".